

WHAT IS CLAIMED IS:

1. A semiconductor resin mold comprising:  
a resin molding cavity having an attachment  
surface to which a resin tape substrate with a  
semiconductor chip mounted thereon is attached; and  
a plurality of suction holes opened in said  
attachment surface and connectable to a suction system.

2. The semiconductor resin mold according to  
claim 1, further comprising an upper mold member; and a  
lower mold member assembled with the upper mold member  
to define said cavity.

3. The semiconductor resin mold according to  
claim 1, wherein said plurality of suction holes are  
disposed in a middle portion of said attachment surface  
and in a periphery of the middle portion.

4. The semiconductor resin mold according to  
claim 3, wherein said suction holes have the same size.

5. The semiconductor resin mold according to  
claim 1, further comprising a plurality of slits formed  
in said attachment surface, wherein said suction holes  
have openings disposed in the plurality of slits.

6. The semiconductor resin mold according to  
claim 3, further comprising a plurality of slits formed  
in said attachment surface, wherein said suction holes  
have openings disposed in the plurality of slits.

7. The semiconductor resin mold according to  
claim 3, wherein said suction holes in the middle

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portion of said attachment surface and said suction holes in the peripheral portion of said attachment surface are connectable to different suction systems.

5        8. The semiconductor resin mold according to claim 7, wherein said different suction systems are driven successively by a control circuit at a predetermined time interval.

10       9. The semiconductor resin mold according to claim 5, wherein said suction hole in the middle portion of said attachment surface and said suction hole in a periphery of the middle portion are formed independently to be connectable to different suction systems.

15       10. The semiconductor resin mold according to claim 9, wherein said different suction systems are driven successively by a control circuit at a predetermined time interval.

20       11. A semiconductor resin molding method of sealing a mount portion of a semiconductor chip on a resin tape substrate with a resin molded body excluding a back surface of the resin tape substrate, said method comprising:

25       preparing a mold comprising a cavity having a plurality of suction holes connectable to a suction system in an attachment surface to which said resin tape substrate is attached;

attaching said resin tape substrate to

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the attachment surface of the cavity of said mold;

sucking/fixing said resin tape substrate to the attachment surface of said cavity after the step of attaching said resin tape substrate to the attachment surface; and

supplying a resin into the cavity of said mold after the step of sucking/fixing said resin tape substrate onto the attachment surface.

12. The semiconductor resin molding method according to claim 11, wherein said plurality of suction holes are disposed in a middle portion of said attachment surface and in a periphery of the middle portion.

13. The semiconductor resin molding method according to claim 11, wherein said suction holes are disposed in a plurality of slits formed in said attachment surface.

14. The semiconductor resin molding method according to claim 12, wherein said suction holes have openings disposed in a plurality of slits formed in said attachment surface.

15. The semiconductor resin molding method according to claim 12, wherein said suction holes in the middle portion of said attachment surface and said suction holes in a periphery of the middle portion are connectable to different suction systems.

16. The semiconductor resin molding method

according to claim 14, wherein said suction holes in the middle portion of said attachment surface and said suction holes in a periphery of the middle portion are connectable to different suction systems.

5           17. The semiconductor resin molding method according to claim 15, wherein said step of sucking/fixing said resin tape substrate attached to the attachment surface of said cavity comprises:

              sucking/fixing the middle portion of said resin  
10       tape substrate by said suction hole in the middle portion of said attachment surface; and

              subsequently sucking/fixing said resin tape substrate by said suction hole in the periphery of the middle portion of said attachment area surface.

15           18. The semiconductor resin molding method according to claim 15, wherein said different suction systems are driven at a predetermined time interval.

              19. The semiconductor resin molding method according to claim 16, wherein said different suction  
20       systems are driven at a predetermined time interval.

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